

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. A clean version of the pending claims is appended hereto for the Examiner's convenience.

1. (Twice amended) A method of immobilizing biomolecules on a surface of an array substrate, wherein the array substrate comprises an inorganic material, comprising:

providing the array substrate having a first surface including a functional group for non-covalent attachment to a biomolecule;

contacting at least a portion of the first surface with a reducing agent;

attaching a biomolecule to the functional group.
2. (Original) The method of claim 1, wherein the reducing agent includes a hydride.
3. (Original) The method of claim 1, wherein the reducing agent includes a borohydride.
4. (Original) The method of claim 3, wherein the borohydride includes sodium borohydride.
5. (Original) The method of claim 4, wherein the sodium borohydride is in a solution at a concentration ranging from 0.01% to 1% by volume.
6. (Previously presented) An array substrate made in accordance with the method of claim 2.
7. (Previously presented) An array substrate made in accordance with the method of claim 5.
24. (Previously presented) The method of claim 1, wherein the array substrate is coated with an amino-silane.
25. (Previously presented) The method of claim 24, wherein the amino-silane includes gamma-amino-propyl-silane.
26. (Previously presented) The method of claim 3, wherein the sodium borohydride is in a solution at a concentration ranging from 0.2% to 0.3% by volume.

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27. (Previously presented) The method of claim 1, wherein the reducing agent includes sodium cyanoborohydride, copper sulfate, or hydrogen.
28. (Previously presented) The method of claim 1, wherein the array substrate comprises a microarray.
29. Cancelled
30. (Previously presented) A method of immobilizing biomolecules on a surface of a substrate comprising:

providing a substrate having a first surface including a functional group for non-covalent attachment to a biomolecule, wherein the substrate comprises an inorganic material;

contacting at least a portion of the first surface with a reducing agent;

attaching a biomolecule to the functional group.
31. (Previously presented) The method of claim 30, wherein the inorganic material is a metal, a semiconductor material, a glass, or a ceramic material.
32. (Previously presented) The method of claim 31, wherein the glass or ceramic material is quartz, glass, porcelain, alkaline earth aluminoborosilicate glass, or a mixed oxide.
33. (Previously presented) The method of claim 30, wherein the substrate is a glass slide.
34. (Currently amended) The method of claim 30, wherein the ~~borohydride~~ borohydride [[reducing agent]] includes sodium borohydride.
35. (Previously presented) A substrate made in accordance with the method of claim 30.
36. (New) A method of immobilizing biomolecules on a surface of an array substrate, wherein the array substrate comprises an organic material, wherein the organic material comprises a polyester, a polyvinylchloride, a polyvinylidene fluoride, a polytetrafluoroethylene, a polycarbonate, a polyamide, a poly(meth)acrylate, a polystyrene, a polyethylene, or a ethylene/vinyl acetate copolymer, comprising:

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providing the array substrate having a first surface including a functional group for non-covalent attachment to a biomolecule;

contacting at least a portion of the first surface with a reducing agent;

attaching a biomolecule to the functional group.